

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:

INVENTOR: Ari Uistola

SERIAL NO.: 09/\_\_\_\_\_ ART UNIT: 2682

FILED: Herewith EXAMINER: Mehrpour, N.

TITLE: Method And Apparatus For Increasing A Probability That A Dual-Band Mobile  
Station Will Acquire A Desired Autonomous System

ATTORNEY DOCKET NO.: 872.7588 USX

Hon. Commissioner of Patents

Washington, D.C. 20231

**PRELIMINARY AMENDMENT**

Sir:

This Preliminary Amendment is herewith being filed in conjunction with the filing of a Continuation Application under 35 U.S.C. §1.53(b). The parent application is copending and allowed U.S. Patent Application S.N. 08/990,043, filed on 12/12/97. Please amend the Application as shown below.

**In the Specification:**

Replace the paragraph beginning at page 9, line 13, with the following:

The memory 24 also stores, in accordance with an aspect of this invention, a Band Order Table 24A. The Band Order Table 24A has a plurality of entries constituting a list of frequency bands (see Figs. 4 and 5) and is ordered in the way the frequency bands are to be searched. The Band Order Table 24A can contain from one band to all bands (e.g., 800 MHz A and/or B, 1900 MHz A, B, C, D, E, and/or F). The memory 24 also stores Last-Used DCCH Information (channel/frequency band) 24B which is updated when the mobile station 10 camps on an acceptable or useable DCCH. The Band Order Table 24A and Last-Used DCCH Information 24B are preferably stored in a permanent (non-volatile) portion of the memory 24. The memory 24 also typically stores a list of channels to be measured, one or more SIDs, RSIDs, PSIDs, as described above, as well as other relevant parameters, such as a current SCANINTERVAL value and DELAY value, as received from a Control Channel Selection Parameters message.

Replace the paragraph beginning at page 12, line 31, with the following:

At Step 10 a determination is made if the current channel is the last channel in the

channel list (see Step 2). If it is, then control passes, in accordance with an aspect of this invention, to Step 10b. If the current channel is not the last channel in the channel list, then the mobile station 10 tunes to the next strongest channel in the channel list and control transfers back to Step 4.

**In the Claims:**

Cancel the originally filed claims 1-20 without prejudice or disclaimer.

Add the following new claims:

21. (New) A mobile station, comprising:

a radio frequency (RF) transceiver;

a memory storing a list of entries, individual ones of said entries corresponding to a frequency band comprising at least one frequency channel; and

a controller, bidirectionally coupled to said memory and to said RF transceiver, and operating in response to a search procedure being invoked to locate a desired Non-Public wireless communication system, specifically one of a Residential wireless communication system or a Private wireless communication system, for accessing said memory to obtain a first entry of said list so as to determine a first frequency band to be searched for said desired one of said Residential wireless communication system or said Private wireless communication system, said controller being programmed to execute, using said RF transceiver, a search procedure in said first frequency band being searched in an attempt to locate a control channel of said desired one of said Residential wireless communication system or said Private wireless communication system and, if said control channel of said desired one of said Residential wireless communication system or said Private wireless communication system is not located within said first frequency band being searched, for accessing said memory to obtain a next entry in said list to determine a next frequency band to be searched for said desired one of said Residential wireless communication system or said Private wireless communication system, said controller continuing to search in this manner until either all of said entries of said list have been obtained from said memory or until said control channel of said desired one of said Residential wireless

communication system or said Private wireless communication system is located.

22. (New) A mobile station as in claim 21, wherein one said entries of said list comprises an identity of a frequency band wherein an acceptable control channel was last located.

23. (New) A mobile station as in claim 21, wherein at least one frequency band is an 800 MHz frequency band.

24. (New) A mobile station as in claim 21, wherein at least one frequency band is a 1900 MHz frequency band.

25. (New) A mobile station as in claim 21, wherein said controller is responsive to an input for accessing said memory to modify said list of entries.

26. (New) A mobile station as in claim 21, wherein said controller is responsive to an input for accessing said memory to add an entry to said list.

27. (New) A mobile station as in claim 21, wherein said controller is responsive to an input for accessing said memory to delete an entry from said list.

28. (New) A mobile station as in claim 21, wherein said controller is responsive to an input for accessing said memory to re-order entries in said list.

29. (New) A mobile station as in claim 25, wherein said mobile station is further comprised of a user interface, and wherein said controller receives said input from said user interface.

30. (New) A mobile station as in claim 25, wherein said controller receives said input through said RF transceiver.

31. (New) A mobile station as in claim 21, wherein said controller is responsive to information received from a service provider through said RF transceiver for modifying said list of entries in said memory.

32. (New) A mobile station as in claim 21, wherein information received

through said RF transceiver is stored in said memory for re-ordering said list of entries.

33. (New) A mobile station, comprising:

a radio frequency (RF) transceiver;

a memory storing information that is descriptive of all possible frequency bands that the mobile station is capable of operating with, each frequency band comprising at least one frequency channel; and

a controller, bidirectionally coupled to said memory and to said RF transceiver, and operating in response to a search procedure being invoked to locate a desired Non-Public wireless communication system, specifically one of a Residential wireless communication system or a Private wireless communication system, for accessing said memory to obtain a first frequency band to be searched for said desired one of said Residential wireless communication system or said Private wireless communication system, said controller being programmed to execute, using said RF transceiver, a search procedure in said first frequency band being searched in an attempt to locate a control channel of said desired one of said Residential wireless communication system or said Private wireless communication system and, if said control channel of said desired one of said Residential wireless communication system or said Private wireless communication system is not located within said first frequency band being searched, for accessing said memory to obtain another frequency band to be searched for said desired one of said Residential wireless communication system or said Private wireless communication system, said controller continuing to search in this manner until all of the frequency bands that the mobile station is capable of operating with have been searched or until said desired one of said Residential wireless communication system or said Private wireless communication system is located.

34. (New) A mobile station as in claim 33, wherein said memory stores an identity of a frequency band wherein an acceptable control channel was last located.

35. (New) A mobile station as in claim 33, wherein at least one frequency band is an 800 MHz frequency band.

36. (New) A mobile station as in claim 33, wherein at least one frequency band is a 1900 MHz frequency band.

37. (New) A mobile station as in claim 33, wherein said controller is responsive to an input for accessing said memory to modify said stored information.

38. (New) A mobile station as in claim 33, wherein said controller is responsive to an input for accessing said memory to add a frequency band.

39. (New) A mobile station as in claim 33, wherein said controller is responsive to an input for accessing said memory to delete a frequency band.

40. (New) A mobile station as in claim 33, wherein said controller is responsive to an input for accessing said memory to re-order frequency bands appearing in a stored list of frequency bands.

41. (New) A mobile station as in claim 37, wherein said mobile station is further comprised of a user interface, and wherein said controller receives said input from said user interface.

42. (New) A mobile station as in claim 37, wherein said controller receives said input through said RF transceiver.

43. (New) A mobile station as in claim 33, wherein said controller is responsive to information received from a service provider through said RF transceiver for modifying said information stored in said memory.

44. (New) A mobile station as in claim 33, wherein information received through said RF transceiver is used to re-order a list of frequency bands stored in said memory.--

#### **REMARKS**

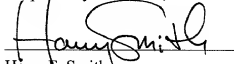
The specification has been amended to correct several typographical errors. No new matter is added.

The attached Information Disclosure Statement makes of record the prior art cited during the prosecution of the parent application. Copies of these references can be found in the file jacket of the parent application, and the Examiner is respectfully requested to consider these reference and to make same of record. Should one or more of these references not be found in the file jacket of the parent application, then the undersigned attorney will gladly provide a copy for consideration and review.

Claims 1-20 have been cancelled and claims 21-44 have been newly added. These claims are fully supported in the specification and drawings as filed, and no new matter is entered.

All of the claims now pending in this continuation patent application are deemed to be in condition for allowance, and this patent application is further believed to be ready to be passed to issue. However, should there be any remaining, unresolved issue that would impede the allowance of all of the pending claims, the Examiner is respectfully invited to contact the undersigned attorney at any one of the numbers appearing below.

Respectfully submitted,



Harry F. Smith

4/12/01

Date

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## VERSION WITH MARKINGS TO SHOW CHANGES MADE

### In the Specification:

Rewrite the paragraph beginning at page 9, line 13, as follows:

The memory 24 also stores, in accordance with an aspect of this invention, a Band Order Table 24A. The Band Order Table 24A has a plurality of entries constituting a list [a] of frequency bands (see Figs. 4 and 5) and is ordered in the way the frequency bands are to be searched. The Band Order Table 24A can contain from one band to all bands (e.g., 800 MHz A and/or B, 1900 MHz A, B, C, D, E, and/or F). The memory 24 also stores Last-Used DCCH Information (channel/frequency band) 24B which is updated when the mobile station 10 camps on an acceptable or useable DCCH. The Band Order Table 24A and Last-Used DCCH Information 24B are preferably stored in a permanent (non-volatile) portion of the memory 24. The memory 24 also typically stores a list of channels to be measured, one or more SIDs, RSIDs, PSIDs, as described above, as well as other relevant parameters, such as a current SCANINTERVAL value and DELAY value, as received from a Control Channel Selection Parameters message.

Rewrite the paragraph beginning at page 12, line 31, as follows:

At Step 10 a determination is made if the current channel is the last channel in the channel list (see Step 2). If it is, then control passes, in accordance with [as] an aspect of this invention, to Step 10b. If the current channel is not the last channel in the channel list, then the mobile station 10 tunes to the next strongest channel in the channel list and control transfers back to Step 4.

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Cancel the originally filed claims 1-20 without prejudice or disclaimer.

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a controller, bidirectionally coupled to said memory and to said RF transceiver, and operating in response to a search procedure being invoked to locate a desired Non-Public wireless communication system, specifically one of a Residential wireless communication system or a Private wireless communication system, for accessing said memory to obtain a first entry of said list so as to determine a first frequency band to be searched for said desired one of said Residential wireless communication system or said Private wireless communication system, said controller being programmed to execute, using said RF transceiver, a search procedure in said first frequency band being searched in an attempt to locate a control channel of said desired one of said Residential wireless communication system or said Private wireless communication system and, if said control channel of said desired one of said Residential wireless communication system or said Private wireless communication system is not located within said first frequency band being searched, for accessing said memory to obtain a next entry in said list to determine a next frequency band to be searched for said desired one of said Residential wireless communication system or said Private wireless communication system, said controller continuing to search in this manner until either all of said entries of said list have been obtained from said memory or until said control channel of said desired one of said Residential wireless communication system or said Private wireless communication system is located.

22. (New) A mobile station as in claim 21, wherein one said entries of said list comprises an identity of a frequency band wherein an acceptable control channel was last located.

23. (New) A mobile station as in claim 21, wherein at least one frequency band is an 800 MHz frequency band.

24. (New) A mobile station as in claim 21, wherein at least one frequency band is a 1900 MHz frequency band.

25. (New) A mobile station as in claim 21, wherein said controller is responsive to an input for accessing said memory to modify said list of entries.



26. (New) A mobile station as in claim 21, wherein said controller is responsive to an input for accessing said memory to add an entry to said list.

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29. (New) A mobile station as in claim 25, wherein said mobile station is further comprised of a user interface, and wherein said controller receives said input from said user interface.

30. (New) A mobile station as in claim 25, wherein said controller receives said input through said RF transceiver.

31. (New) A mobile station as in claim 21, wherein said controller is responsive to information received from a service provider through said RF transceiver for modifying said list of entries in said memory.

32. (New) A mobile station as in claim 21, wherein information received through said RF transceiver is stored in said memory for re-ordering said list of entries.

33. (New) A mobile station, comprising:

a radio frequency (RF) transceiver;

a memory storing information that is descriptive of all possible frequency bands that the mobile station is capable of operating with, each frequency band comprising at least one frequency channel; and

a controller, bidirectionally coupled to said memory and to said RF transceiver, and operating in response to a search procedure being invoked to locate a desired Non-Public wireless communication system, specifically one of a Residential wireless communication system or a Private wireless communication system, for accessing said memory to obtain a first frequency band to be searched for said desired one of said Residential wireless communication system or said Private

wireless communication system, said controller being programmed to execute, using said RF transceiver, a search procedure in said first frequency band being searched in an attempt to locate a control channel of said desired one of said Residential wireless communication system or said Private wireless communication system and, if said control channel of said desired one of said Residential wireless communication system or said Private wireless communication system is not located within said first frequency band being searched, for accessing said memory to obtain another frequency band to be searched for said desired one of said Residential wireless communication system or said Private wireless communication system, said controller continuing to search in this manner until all of the frequency bands that the mobile station is capable of operating with have been searched or until said desired one of said Residential wireless communication system or said Private wireless communication system is located.

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35. (New) A mobile station as in claim 33, wherein at least one frequency band is an 800 MHz frequency band.

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37. (New) A mobile station as in claim 33, wherein said controller is responsive to an input for accessing said memory to modify said stored information.

38. (New) A mobile station as in claim 33, wherein said controller is responsive to an input for accessing said memory to add a frequency band.

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40. (New) A mobile station as in claim 33, wherein said controller is responsive to an input for accessing said memory to re-order frequency bands appearing in a stored list of frequency bands.

41. (New) A mobile station as in claim 37, wherein said mobile station is further comprised of a user interface, and wherein said controller receives said input from said user interface.

42. (New) A mobile station as in claim 37, wherein said controller receives said input through said RF transceiver.

43. (New) A mobile station as in claim 33, wherein said controller is responsive to information received from a service provider through said RF transceiver for modifying said information stored in said memory.

44. (New) A mobile station as in claim 33, wherein information received through said RF transceiver is used to re-order a list of frequency bands stored in said memory.--